Commonwealth of Kentucky
Natural Resources & Environmental Protection Cabinet
Department for Environmental Protection

DIVISION FOR AIR QUALITY

DEP7007N

Emissions, Stacks, and Controls Information

Applicant Name: _____ Log # _____

SECTION I. Emissions Unit and Emission Point Information

KyEIS ID #	Emissions Unit and Emission Point Descriptions	Maximum Operating Parameters		Permitted Operating Parameters		
		Hourly Operating Rate (SCC Units/hr)	Annual Operating Hours (hrs/yr)	Hourly Operating Rate (SCC Units/hr)	Annual Operating Rate (SCC Units/yr)	Annual Operating Hours (hrs/yr)
	Emission Unit Name: Date Constructed: HAPs present? ☐ Yes ☐ No					
	Emission Point Name: Source ID: SCC Code: SCC Units: KyEIS Stack #: Fuel Ash Content: Fuel Sulfur Content: Fuel Heat Content Ratio: Applicable Regulations:					
	Emission Point Name: Source ID: SCC Code: SCC Units: KyEIS Stack #: Fuel Ash Content: Fuel Sulfur Content: Fuel Heat Content Ratio: Applicable Regulations:					

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(continued)

SECTION I. Emission Units and Emission Point Information (continued)

KyEIS ID #	Emission Factors			Control Equipment		Hourly (lb/hr) Emissions			Annual (tons/yr) Emissions		
	Pollutant	Emission Factor (lb/SCC Units)	Emission Factor Basis	Control Equipment Association	Pollutant Overall Efficiency (%)	Uncontrolled Unlimited Potential	Controlled Limited Potential	Allowable	Uncontrolled Unlimited Potential	Controlled Limited Potential	Allowable
				1st control device KyEIS Control ID #: Collection efficiency: 2nd control device KyEIS Control ID #: Collection efficiency: 1st control device KyEIS Control ID #: Collection efficiency: 2nd control device KyEIS Control ID #: Collection efficiency:							

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SECTION I. Emissions Unit and Emission Point Information

KyEIS ID #	Emissions Unit and Emission Point Descriptions	Maximum Operating Parameters		Permitted Operating Parameters		
		Hourly Operating Rate (SCC Units/hr)	Annual Operating Hours (hrs/yr)	Hourly Operating Rate (SCC Units/hr)	Annual Operating Rate (SCC Units/yr)	Annual Operating Hours (hrs/yr)
	Plant Wide					

SECTION I. Emission Units and Emission Point Information (continued)

KyEIS ID #	Emission Factors			Control Equipment		Hourly (lb/hr) Emissions			Annual (tons/yr) Emissions		
	Pollutant	Emission Factor (lb/SCC Units)	Emission Factor Basis	Control Equipment Association	Pollutant Overall Efficiency (%)	Uncontrolled Unlimited Potential	Controlled Limited Potential	Allowable	Uncontrolled Unlimited Potential	Controlled Limited Potential	Allowable
Plant Wide											

SECTION II. Stack Information

KyEIS Stack ID #	Stack Description	Stack Physical Data			Stack Geographic Data			Stack Gas Stream Data		
		Height (ft)	Diameter (ft)	Vent Height (ft)	Vertical Coordinate	Horizontal Coordinate	Coordinate Collection Method Code	Flowrate (acfm)	Temperature (^{o}F)	Exit Velocity (ft/sec)

SECTION III. Control Equipment Information for Cyclone

KyEIS Control ID #	Control Equipment Description	Manufacturer	Model Name and Number	Date Installed	Cost

Inlet Gas Stream Data

Temperature:	Flowrate (scfm at 68°F):	Gas density (lb/ft³):	Particle density (lb/ft³) or Specific Gravity:	Average particle diameter (µm): *(or attach a particle size distribution table)*
_____ °F _____ °C				

Equipment Physical Data

The control equipment manufacturer's equipment specifications and recommended operating procedures may be submitted in place of this information.

Type of cyclone:
Pick one:
☐ Single
☐ Multiple
Number of multiclone _____
Pick one:
☐ High-efficiency
☐ Conventional
☐ High-throughput

Dimensions of cyclone (specify units):

Inlet height	_____	Inlet width	_____
Body height	_____	Body diameter	_____
Bottom cone height	_____	Dust outlet tube diameter	_____
Gas outlet tube diameter	_____	Vortex finder height	_____

Equipment Operational Data

Pressure drop across unit (inches water gauge):	Pollutants collected/controlled:	Pollutant removal/destruction efficiency (%):

SECTION III. Control Equipment Information for Electrostatic Precipitator

KyEIS Control ID #	Control Equipment Description	Manufacturer	Model Name and Number	Date Installed	Cost

Inlet Gas Stream Data

Temperature:	Flowrate (scfm at 68°F):	Gas density (lb/ft³):	Particle density (lb/ft³) or Specific Gravity:	Average particle diameter (µm): *(or attach a particle size distribution table)*
_____ °F _____ °C				

Equipment Physical Data

The control equipment manufacturer's equipment specifications and recommended operating procedures may be submitted in place of this information.

Type of ESP: *Pick one:*	Dimensions of ESP (specify units):	Number of stages:	Number of plates per stage:
☐ Dry, negative corona ☐ Wet, negative corona ☐ Wet, positive corona	Collection plate height _____ Length of collection plate in direction of gas flow _____ ESP total width _____ ESP total height _____		

Particle migration (drift) velocity:	Particle resistivity:	Voltage across plates:

Equipment Operational Data

Pressure drop across unit (inches water gauge):	Pollutants collected/controlled:	Pollutant removal/destruction efficiency (%):

SECTION III. Control Equipment Information for Scrubber

KyEIS Control ID #	Control Equipment Description	Manufacturer	Model Name and Number	Date Installed	Cost

Inlet Gas Stream Data

Temperature:	Flowrate (scfm at 68°F):	Gas density (lb/ft³):	Particle density (lb/ft³) or Specific Gravity:	Average particle diameter (µm): *(or attach a particle size distribution table)*
_____ ° F _____ ° C				

Equipment Physical Data

The control equipment manufacturer's equipment specifications and recommended operating procedures may be submitted in place of this information.

Type of scrubber:	Type of Flow:	Dimensions of scrubber:
☐ Venturi Throat type _____	☐ Concurrent	Length in direction of gas flow _____ ft
☐ Packed bed Packing type _____ Packing height (inches) _____	☐ Countercurrent	Cross-sectional area _____ sq.ft
☐ Spray tower Number of nozzles _____ Nozzle pressure (psig) _____	☐ Crossflow	Venturi throat velocity _____ ft/s
☐ Other (specify) _____		

Type of mist eliminator:	Dimensions of mist eliminator:	Pressure drop across mist eliminator (in. H_2O):
	Cross-sectional area _____ sq.ft	
Chemical composition of scrubbing liquid:	Scrubbing liquid flowrate: _____ gal/min Fresh liquid makeup rate: _____ gal/min	Disposal method of scrubber effluent:

Equipment Operational Data

Pressure drop across unit (inches water gauge):	Pollutants collected/controlled:	Pollutant removal/destruction efficiency (%):

SECTION III. Control Equipment Information for Filter

KyEIS Control ID #	Control Equipment Description	Manufacturer	Model Name and Number	Date Installed	Cost

Inlet Gas Stream Data

Temperature:	Flowrate (scfm at 68°F):	Gas density (lb/ft³):	Particle density (lb/ft³) or Specific Gravity:	Average particle diameter (µm): *(or attach a particle size distribution table)*
_____ ° F _____ ° C				

Equipment Physical Data

The control equipment manufacturer's equipment specifications and recommended operating procedures may be submitted in place of this information.

Type of filter unit:	Dimensions of filter unit (specify units): Filtering area: _____ Unit total width: _____ Unit total height: _____	Filtering material:

Cleaning method:	Gas cooling method:
☐ Shaker ☐ Pulse Air ☐ Reverse Air ☐ Pulse Jet ☐ Other (specify) _____	☐ Ductwork: Length _____ ft. Diameter _____ inches ☐ Heat Exchanger ☐ Bleed-in Air _____ scfm (@ 68° F) ☐ Water Spray _____ gpm ☐ Other (specify) _____

Equipment Operational Data

Pressure drop across unit (inches water gauge):	Pollutants collected/controlled:	Pollutant removal/destruction efficiency (%):

SECTION III. Control Equipment Information for Afterburner (Incinerator for Air Pollution Control)

KyEIS Control ID #	Control Equipment Description	Manufacturer	Model Name and Number	Date Installed	Cost

Inlet Gas Stream Data

Temperature:	Flowrate (scfm at 68°F):	Gas density (lb/ft³):	Gas moisture content:	Gas composition:
_____ ° F _____ ° C				

Equipment Physical Data

The control equipment manufacturer's equipment specifications and recommended operating procedures may be submitted in place of this information.

Type of afterburner:	Dimensions of combustion chamber:	Number of burners:	Burner rating (Btu/hr):	Residence time (sec):

Heat exchanger used:	Catalyst used:	Combustion chamber temperature:
☐ Yes Type _____ ☐ No	☐ Yes Type _____ ☐ No	_____ ° F _____ ° C

Type of auxiliary fuel:	Maximum auxiliary fuel usage (specify units):	Composition and quantities of combusted waste:
Higher Heating Value _____ % Sulfur Maximum _____ Average _____ % Ash Maximum _____ Average _____	Hourly _____ Annually _____	

Equipment Operational Data

Pressure drop across unit (inches water gauge):	Pollutants collected/controlled:	Pollutant removal/destruction efficiency (%):

SECTION III. Control Equipment Information for Adsorber

KyEIS Control ID #	Control Equipment Description	Manufacturer	Model Name and Number	Date Installed	Cost

Inlet Gas Stream Data

Temperature:	Flowrate (scfm at 68°F):	Gas density (lb/ft³):	Gas moisture content:	Gas composition:
_____ ° F _____ ° C				

Equipment Physical Data

The control equipment manufacturer's equipment specifications and recommended operating procedures may be submitted in place of this information.

Adsorbent:	Adsorbate(s):	
☐ Activated Charcoal (specify type) _____ ☐ Other (specify) _____		
Dimensions of each bed: Thickness in direction of gas flow _____ inches Cross-sectional area _____ sq. inches	Number of beds:	Weight of adsorbent per bed (lb):

Type of regeneration:	Method of regeneration:	Time on-line before regeneration (minutes):
☐ Replacement ☐ Steam ☐ Other (specify) _____	☐ Alternate use of beds ☐ Source shutdown ☐ Other (specify) _____	

Equipment Operational Data

Pressure drop across unit (inches water gauge):	Pollutants collected/controlled:	Pollutant removal/destruction efficiency (%):

SECTION III. Control Equipment Information for Condenser

KyEIS Control ID #	Control Equipment Description	Manufacturer	Model Name and Number	Date Installed	Cost

Inlet Gas Stream Data

Temperature:	Flowrate (scfm at 68°F):	Gas density (lb/ft³):	Gas moisture content:	Gas composition:
_____ ° F _____ ° C				

Equipment Physical Data

The control equipment manufacturer's equipment specifications and recommended operating procedures may be submitted in place of this information.

Type of condenser:	Condensing surface area (specify units):	Outlet gas temperature:	Outlet gas composition:
Pick one: ☐ Spray Tower ☐ Jet ejector ☐ Barometric ☐ Single-pass shell-and-tube ☐ Multi-pass shell-and-tube Number of passes: _____		_____ ° F _____ ° C	
Coolant type:	Coolant inlet temperature: _____ ° F _____ ° C	Coolant outlet temperature: _____ ° F _____ ° C	Coolant flowrate: Liquid: _____ gal/min Gas: _____ scfm at 68° F

Equipment Operational Data

Pressure drop across unit (inches water gauge):	Pollutants collected/controlled:	Pollutant removal/destruction efficiency (%):

SECTION III. Control Equipment Information for Other Type of Control Equipment

KyEIS Control ID #	Control Equipment Description	Manufacturer	Model Name and Number	Date Installed	Cost

Inlet Gas Stream Data

Temperature:	Flowrate (scfm at 68°F):	Gas density (lb/ft³):	Particle density (lb/ft³) or Specific Gravity:	Average particle diameter (µm): *(or attach a particle size distribution table)*
_____ ° F _____ ° C				

Equipment Physical Data

The control equipment manufacturer's equipment specifications and recommended operating procedures may be submitted in place of this information.

Type of control equipment (give descriptions and a sketch with dimensions):

Equipment Operational Data

Pressure drop across unit (inches water gauge):	Pollutants collected/controlled:	Pollutant removal/destruction efficiency (%):